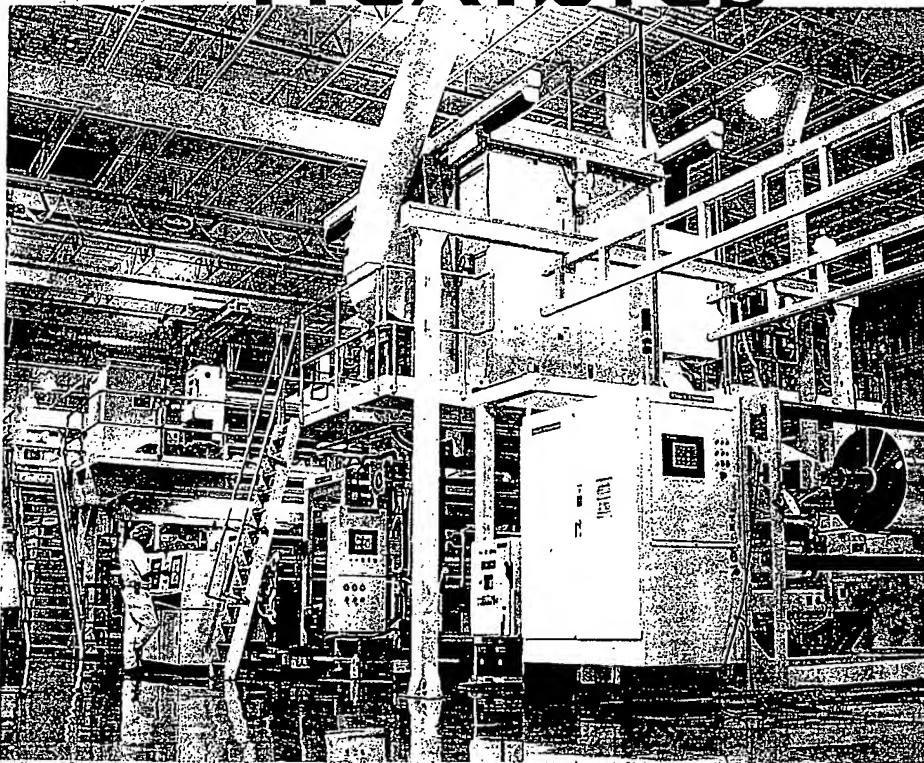


Committed to healthcare flexibles



An aggressive capital expansion demonstrates Amcor Flexibles' commitment to its Madison, WI plants' heritage.

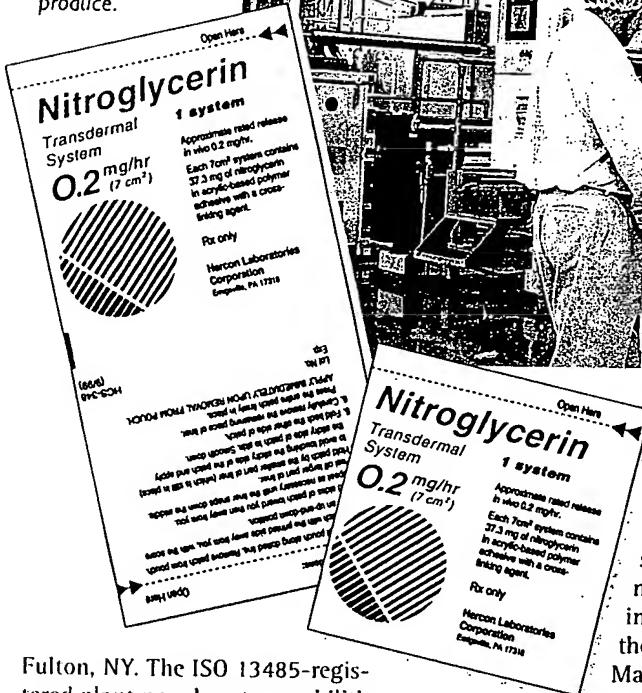
What does an already-successful converter do when opportunity knocks? If healthcare customers are at the door, and they're asking for high-barrier packaging capability that you don't have enough of, you'd better get it. And that's exactly what Amcor Flexibles Madison, Madison, WI, accomplished in 2001. Still Rexam Healthcare Flexibles at the time before its purchase by Amcor, the company undertook an aggressive plant expansion of over 60,000 sq.ft. and installed a unique tandem mono and coextrusion line from Black Clawson Converting Machinery.

By Managing Editor Melissa Larson



Above: Amcor Flexibles Madison managers (clockwise from right): extrusion process specialist David Burger, Bob Liesenfelt (with mandated beard cover) and John Ozcomert. Top left: the new extrusion line.

Right: Supervisory software from Black Clawson, allows Amcor to control and monitor the tandem lines together or individually. Below: A high-barrier medical construction typical of those Amcor can produce.



Fulton, NY. The ISO 13485-registered plant now boasts capabilities that have it well-positioned to take advantage of the market growth in healthcare packaging.

New line capabilities

The line is unique in that it can be operated as two separate lines or it can be used as a single line through the use of a web bridge. As a tandem line it can produce complex multilayer structures. According to Bob Liesenfelt, product development manager for coated and laminated products, the new capabilities "reduce lead times, allow us to better control costs, and continue our commitment to innovative products."

Innovation is key as film producers attempt to keep pace with the requirements of their customers for moisture/oxygen barriers and active packaging. John Ozcomert, PhD,

was under pressure to be able to produce high-barrier constructions such as those that could be used for wound dressings, transdermal patches, alcohol swab packaging, and diagnostic devices. "It's incumbent upon us as market lead-

"It's incumbent on us as market leaders to invest in technology."
-John Ozcomert
Director of Technology

ers to invest in technology that allows us to exploit new materials and novel structures. This line allows us to do just that."

The facility is now able to produce high-tech laminates for the

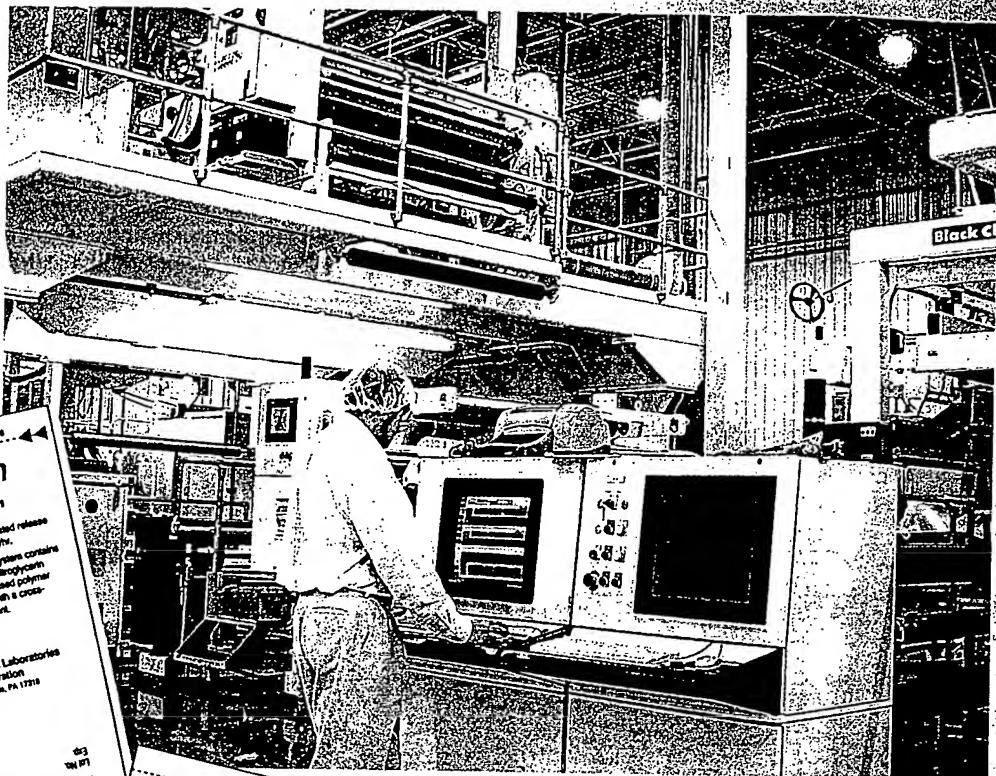
director of technology at Amcor Flexibles Madison, says the company made an investment for the long haul. Managers had been

healthcare industry, including various peelable laminates, extruded and coextruded multilayer constructions, and multilayer blister webs using tie layers. All of these constructions are made to extremely exacting standards, and when the new equipment to serve these demanding customers went in, so did the "white room environment" to house it all. And the equipment vendors and OEMs chosen had to do their jobs swiftly—and flawlessly.

A big project

The start-up of the extrusion line was the Madison facility's first experience with extrusion. They accepted the responsibility for the building expansion, but relied on Black Clawson for turnkey responsibility for the rest of the project. The term turnkey is sometimes carelessly tossed about by manufacturers and customers. For Amcor it meant that Black Clawson would not only have responsibility for the installation but would oversee the installation of ancillary equipment from OEMs.

Says plant engineer Doug Enders, "We minimized our risk by allowing Black Clawson to integrate the line



Coating/Laminating

for us. We were confident with the excellent OEMs that teamed up on the project that there wouldn't be any finger pointing if the going got tough."

Those OEMs included some of the industry's best. Process Control handled the silo erection and resin conveyance, NDC supplied the film gauging system. Eurotherm provided the systems' drives. The guiding system was built by Fife. Enercon provided six treaters—one primary, two secondary, and three post-treaters.

25 semis

For an installation that began with the first of 25 semi-trailer trucks pulling in on May 30th, 2001, and took five weeks, Black Clawson personnel settled in for every day of that time period. A previous "dry run" of the subsystems at Black Clawson's facility helped make for a smoother installation of air and electrical connections, and the modular design of the extruder helped as well.

Ray Whitmore, Black Clawson's director of project engineering, cites the cooperation of the expert suppliers brought in on the project as critical to the success of the project. "A lot of times the difference in the equipment isn't as large as the difference in the companies supplying

the equipment. Take Enercon for example: along with the other companies that supplied equipment on this project, they provided extended training programs for the Amcor team. All of the organizations

and system training that proved crucial to the success of the final project. Enercon provided three corona treaters for each of the tandem lines, positioned as follows:

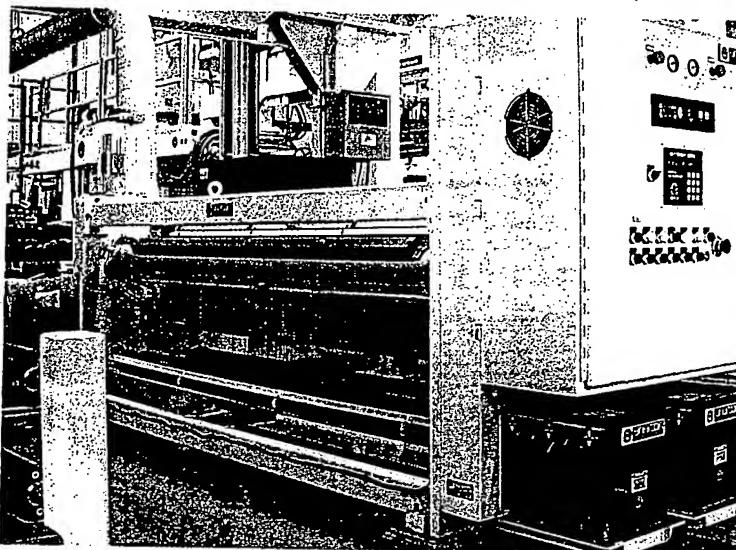
- 1) After the primary unwind (to treat the primary web)
- 2) After the auxiliary unwind (to treat the secondary web)
- 3) Prior to winder (to treat the finished product).

The first two each treat the substrate to raise substrate surface energy for laminating adhesion. The final treater treats the finished product to raise surface energy for additional converting, such as printing.

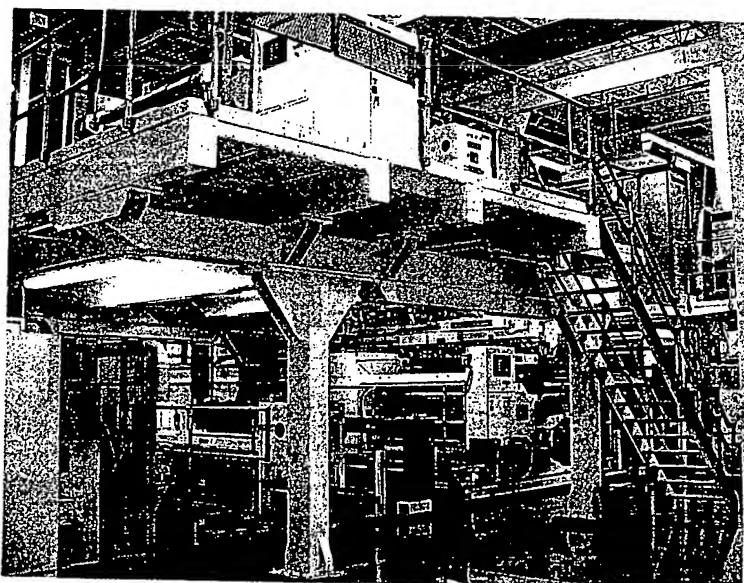
NDC Infrared Engineering provided beta-transmission film-thickness gauging systems before and after the extruders on each of the two lines. These sensor systems travel back and forth over the web 12 times per minute to measure thickness before and after the extrudate is applied to the web. The installation of this type of gauging system is a measure of just how critical the consistency of the

extrusion is to the specifications demanded by healthcare customers.

Once the equipment was in, two weeks of hands-on and classroom training was provided to Rexam's operators by both Black Clawson



Above: Amcor relies on a total of six Enercon Universal-roll treaters. This primary treater ensures optimal dyne levels prior to coating. Below: The success of this project depended not only on Black Clawson but on a host of top-notch subcontractors. This plant has achieved ISO-13485 registration.



involved support their products in a highly professional manner and that makes bringing the project together much easier."

Each of the suppliers of the ancillary equipment provided technology

technical staff and all OEM vendors.

The line is now turning out constructions for the healthcare and personal-care markets, enabling the

"In the healthcare market, it's important for our customers to know that we understand the regulations they're dealing with."

**-Bob Liesenfeld
Product Dev. Mgr.**

converter not only to compete economically but, as Ozcomet puts it, "make novel structures."

"We are continually meeting new performance requirements from our customers," he says. "From UV, moisture and oxygen barriers, to

active packaging and moisture and odor barriers. In addition, they demand quick turnaround, high capacity, and a clean manufacturing environment for their materials. We're able to give them that."

One example of a transdermal construction is the paper/poly/foil/Surlyn rollstock the plant turns out for customer Hercon Laboratories, Emigsville, PA.

Each layer performs a different task in the final nitroglycerin patch package: paper for the printing surface, foil for oxygen and moisture barrier, and Surlyn for sealing qualities as well as resistance to the nitroglycerin itself. Obviously the lamination needed to meet exacting and consistent quality standards to run in the customer's packaging plant.

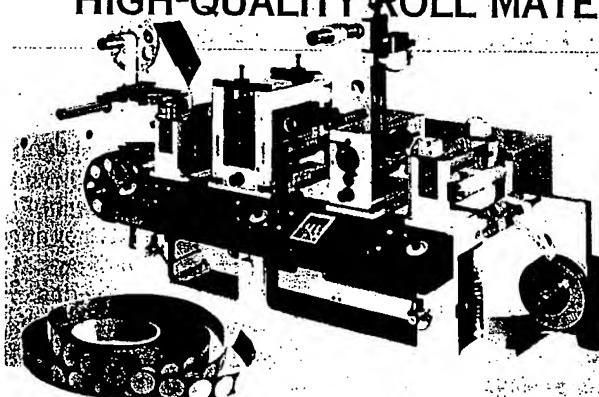
Says Liesenfeld, "In the healthcare market, it is important for our customers to know that we understand the regulations they're dealing with,

that we are not taking any shortcuts, and most of all that we understand the literally life-and-death nature of their products and the way they are used. Operating this way is how we will continue to be leaders in this market." ■

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